

ENP Seepage Management Biscayne Bay Coastal Wetlands, C-111 Spreader Canal and Florida Bay Florida Keys Feasibility Study

Project Overview To WRAC

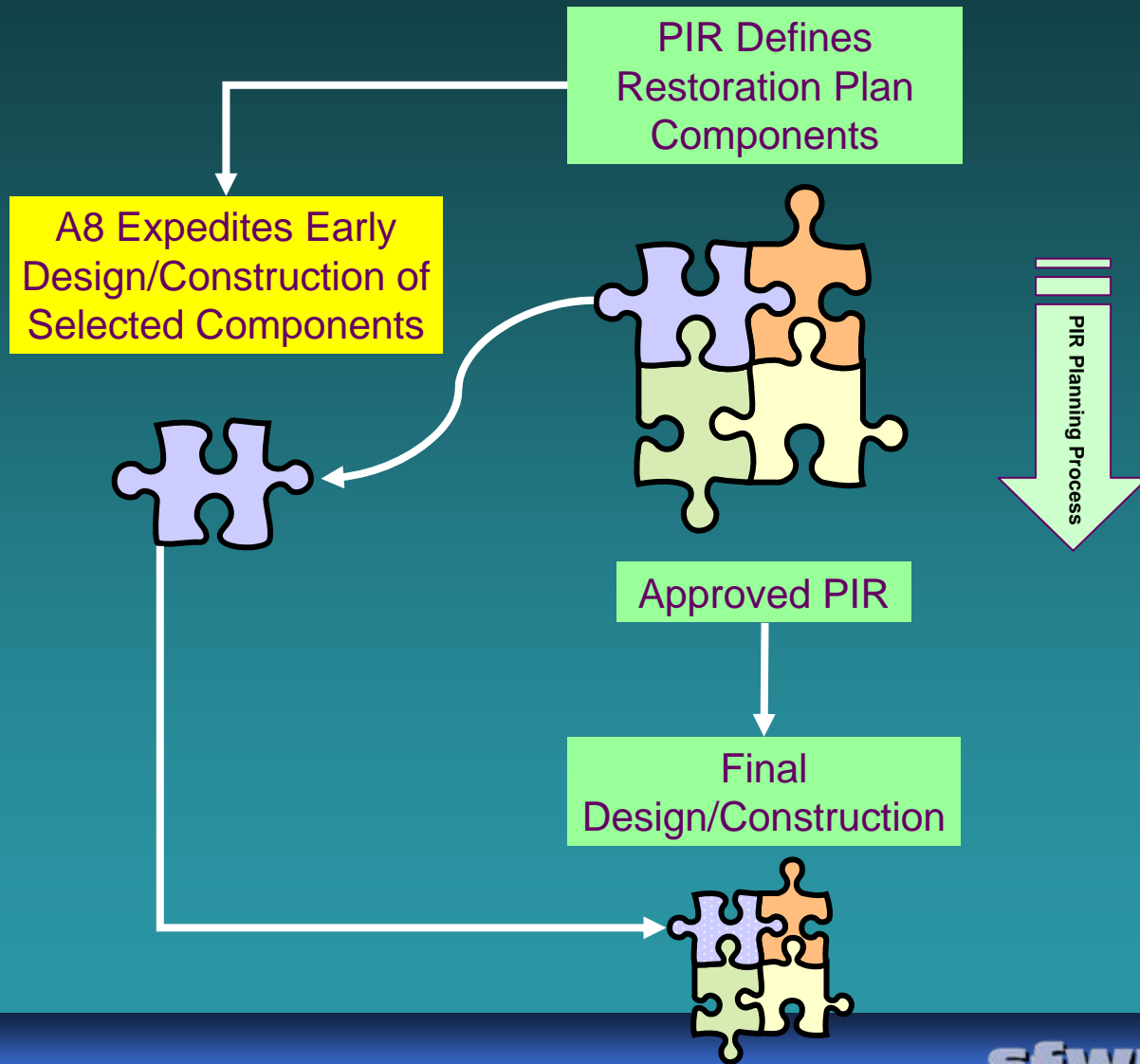
Dewey Worth, Director CERP Project Management

June 8, 2006

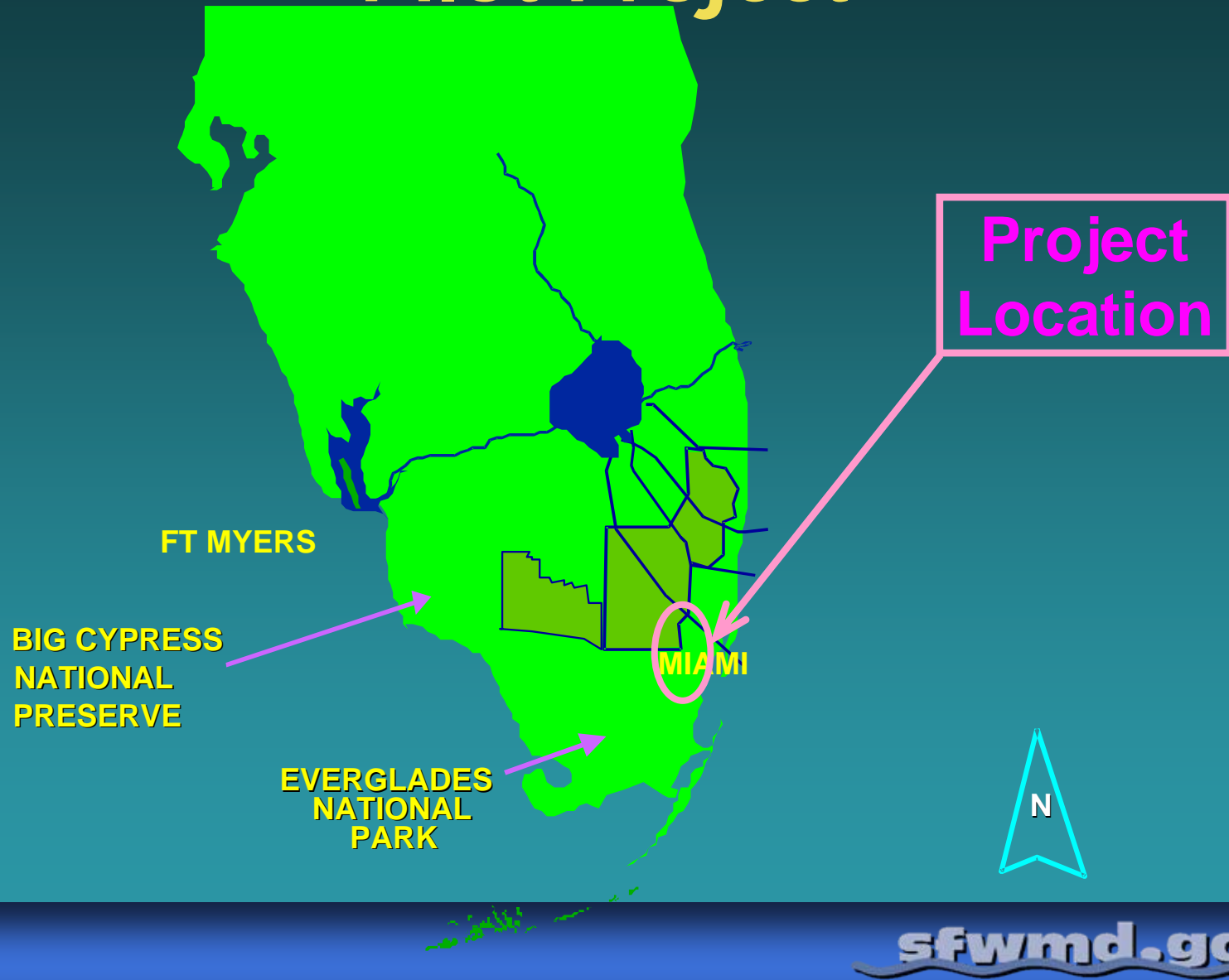


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PIR and Acceler8 Integration



ENP Seepage Management and Pilot Project



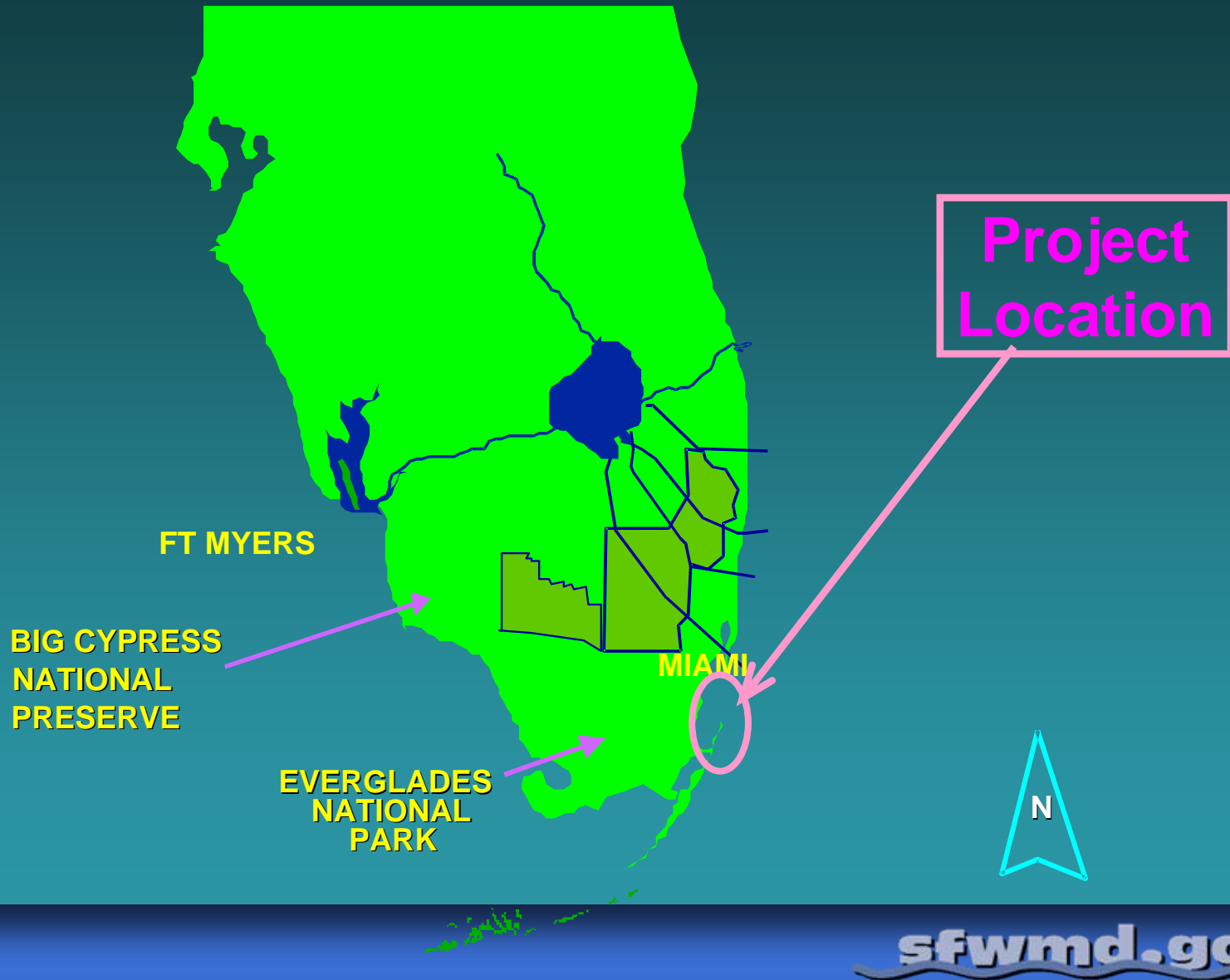
Original Yellow Book Plan



ENP Seepage Management/L-30 Pilot Project

- **ENP Seepage Management project to capture and return seepage to ENP**
- **Complete construction by 2014**
- **PIR just getting underway**
- **Some interim seepage being provided by L-30 Pilot Study by evaluating seepage control technologies**
- **Pilot construction to be completed by 2008**
- **Pilot results to provide cost effective technology for full scale seepage implementation**

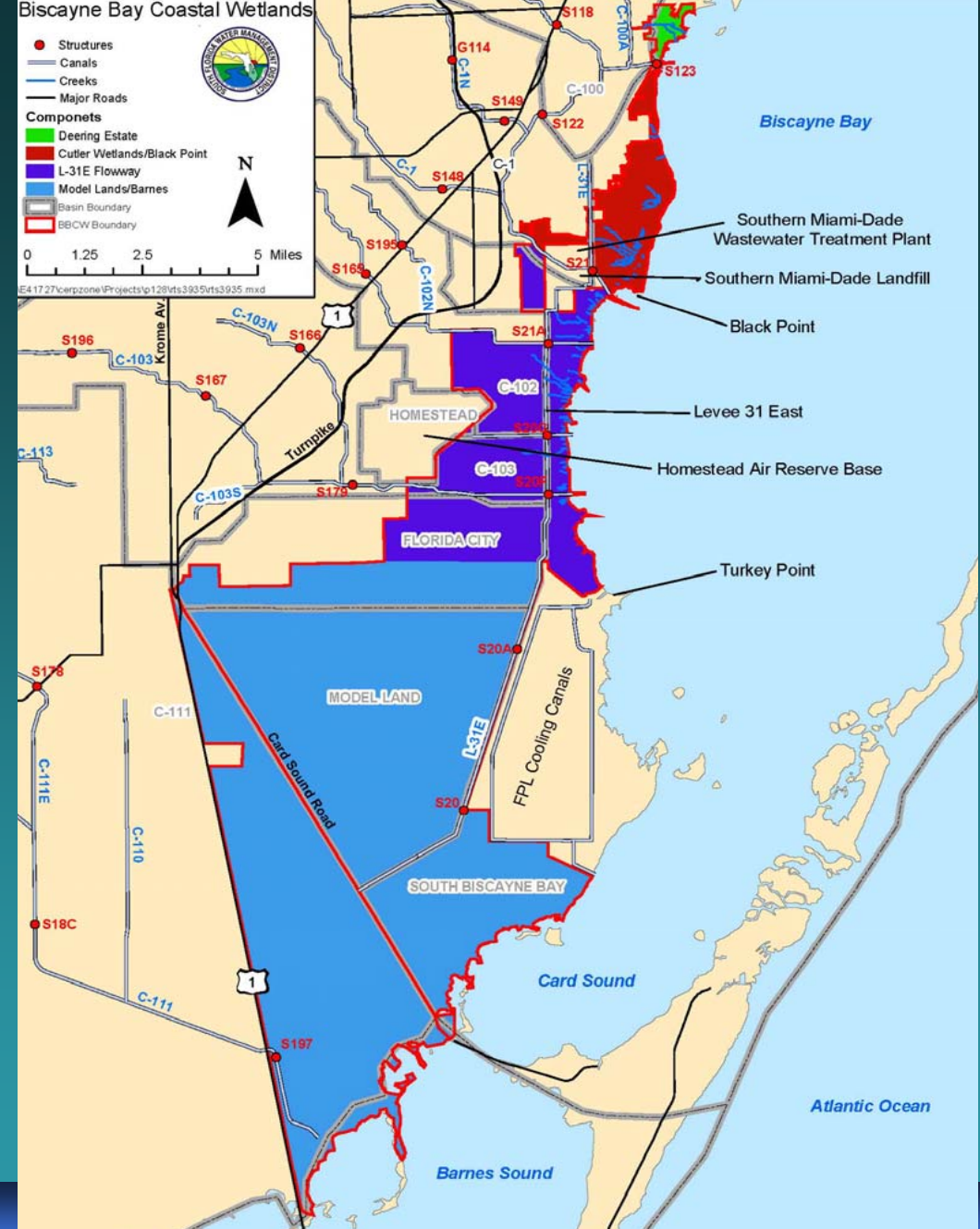
Biscayne Bay Coastal Wetlands



Biscayne Bay Coastal Wetlands

4 sub-components

1. Deering Estate
2. Cutler Flowway and Wetlands
3. L-31E Coastal Wetlands
4. Model Lands



Biscayne Bay Coastal Wetlands

Biscayne Bay Coastal Wetlands

Alternative "O"



Legend

Potential Structures

- Gated Structure
- ◆ Gated Culvert
- ◇ Culvert
- ◆ Under Road Culvert
- Plug
- Pump
- Reuse Application Point
- ▲ Weir

Potential Improvements

- Canal
- Degrade Berms to West
- Levee
- Pipe
- Spreader Canal
- Stub Out
- Wide Canal

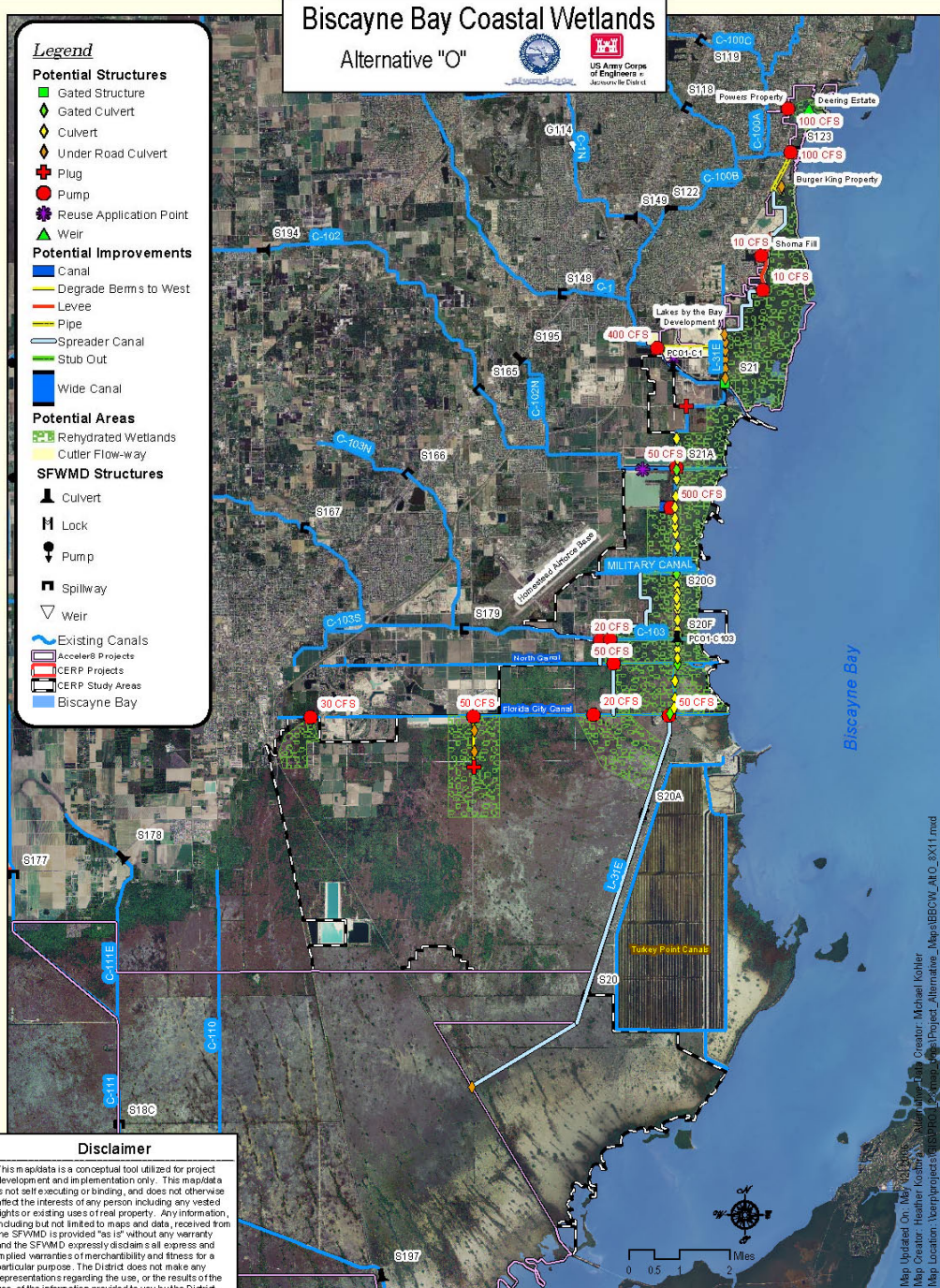
Potential Areas

- Rehydrated Wetlands
- Cutler Flow-way

SFWM Structures

- Culvert
- Lock
- Pump
- Spillway
- Weir

- Existing Canals
- Acceler8 Projects
- CERP Projects
- CERP Study Areas
- Biscayne Bay



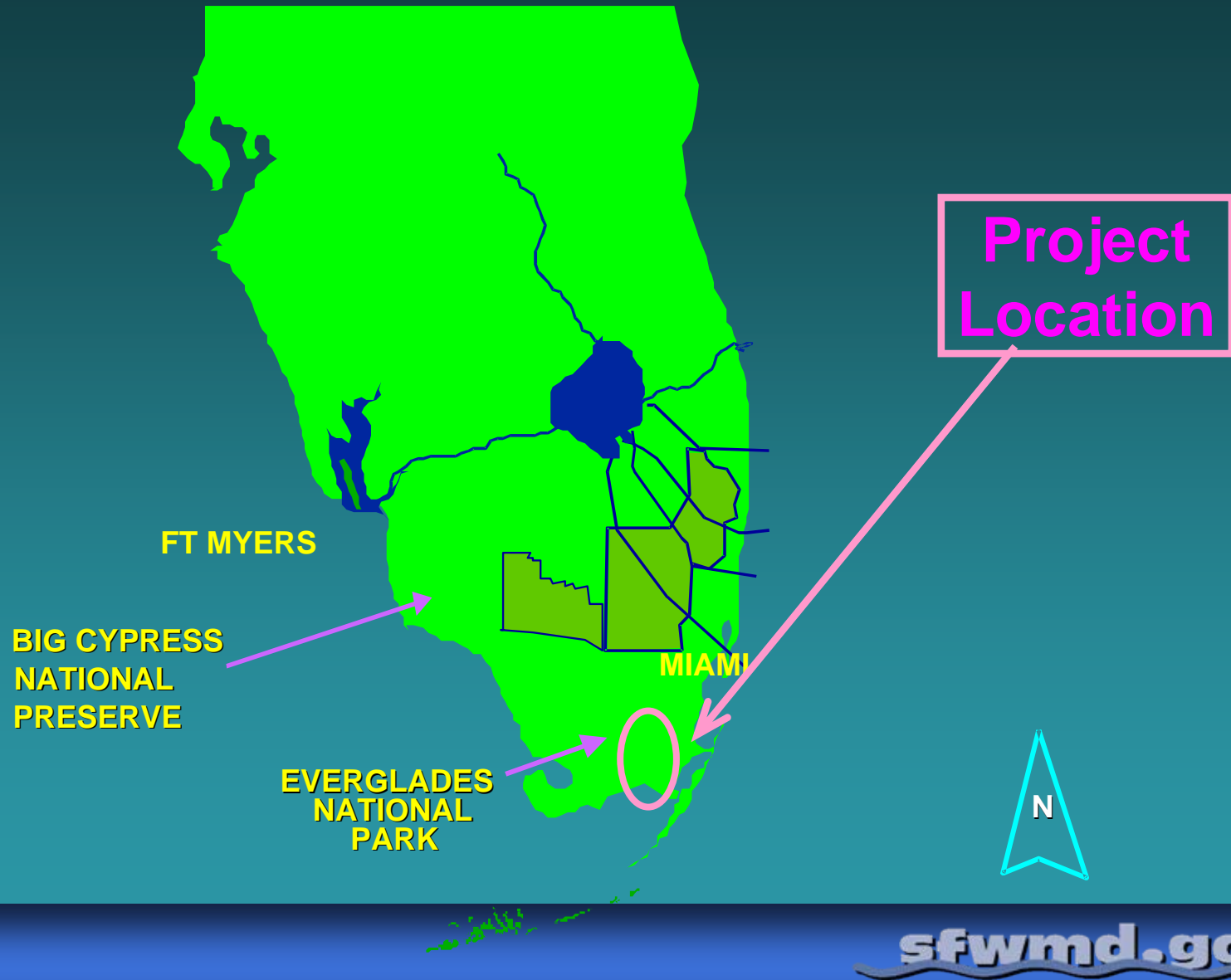
Provisional TSP

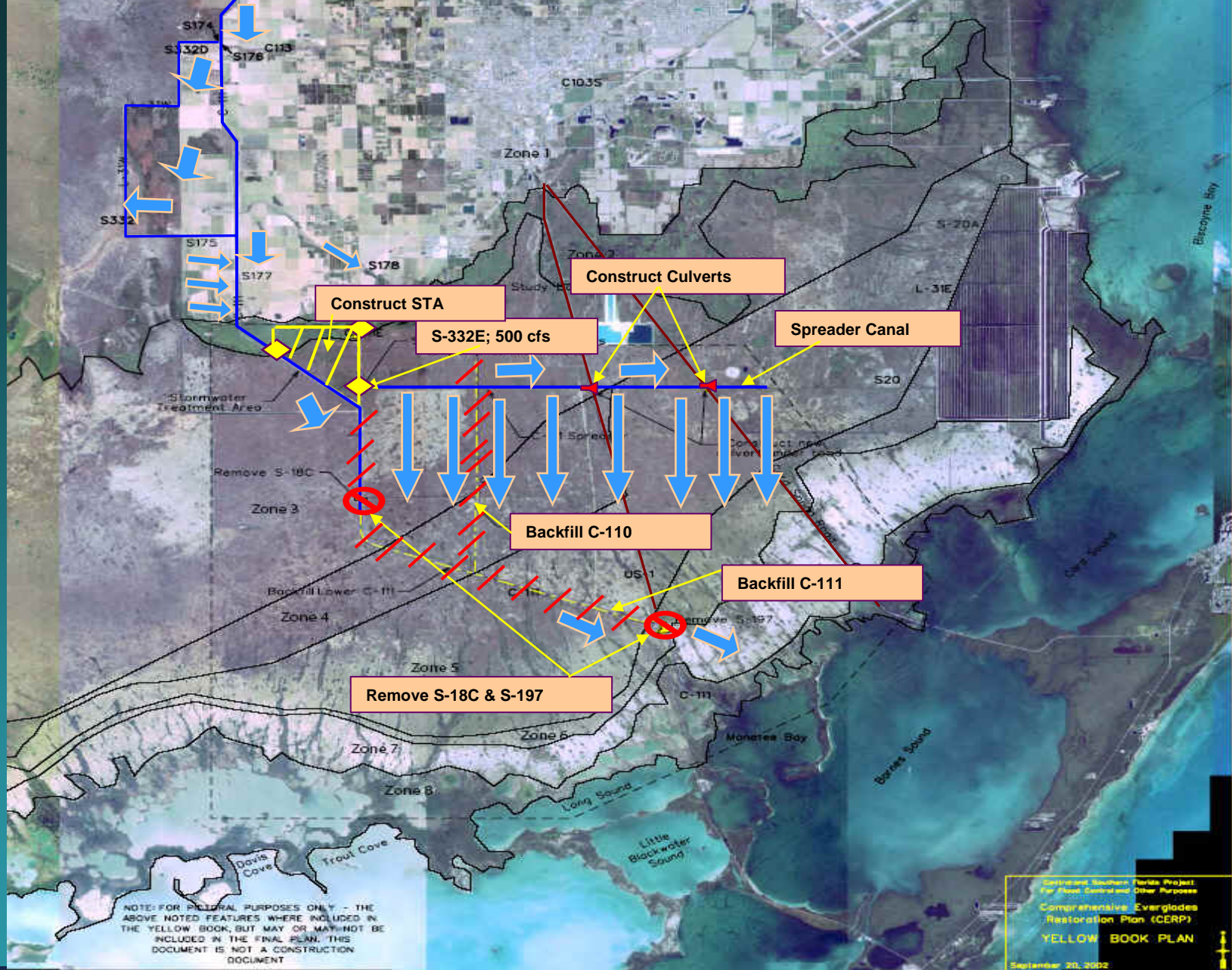
- Embodies A8 design for Deering Estate and Cutler Flow way
- Plan is supported by agencies as best practical given existing constraints
- Provides flexibility to make use of existing and future water but will require significant management
- Uncertain frequency of operation for certain plan elements due to water availability
- Footprint of hydrated freshwater wetlands will likely be modified during final design

PIR/A8 Coordinated Schedule

- A8 30% Design is underway
- PIR team conducting Savings Clause and Water Reservations assessments on the TSP
- Draft PIR Document - Jan 07?
- A8 Construction Start - 31Aug 07 (WA date)

C-111 Spreader Canal Project

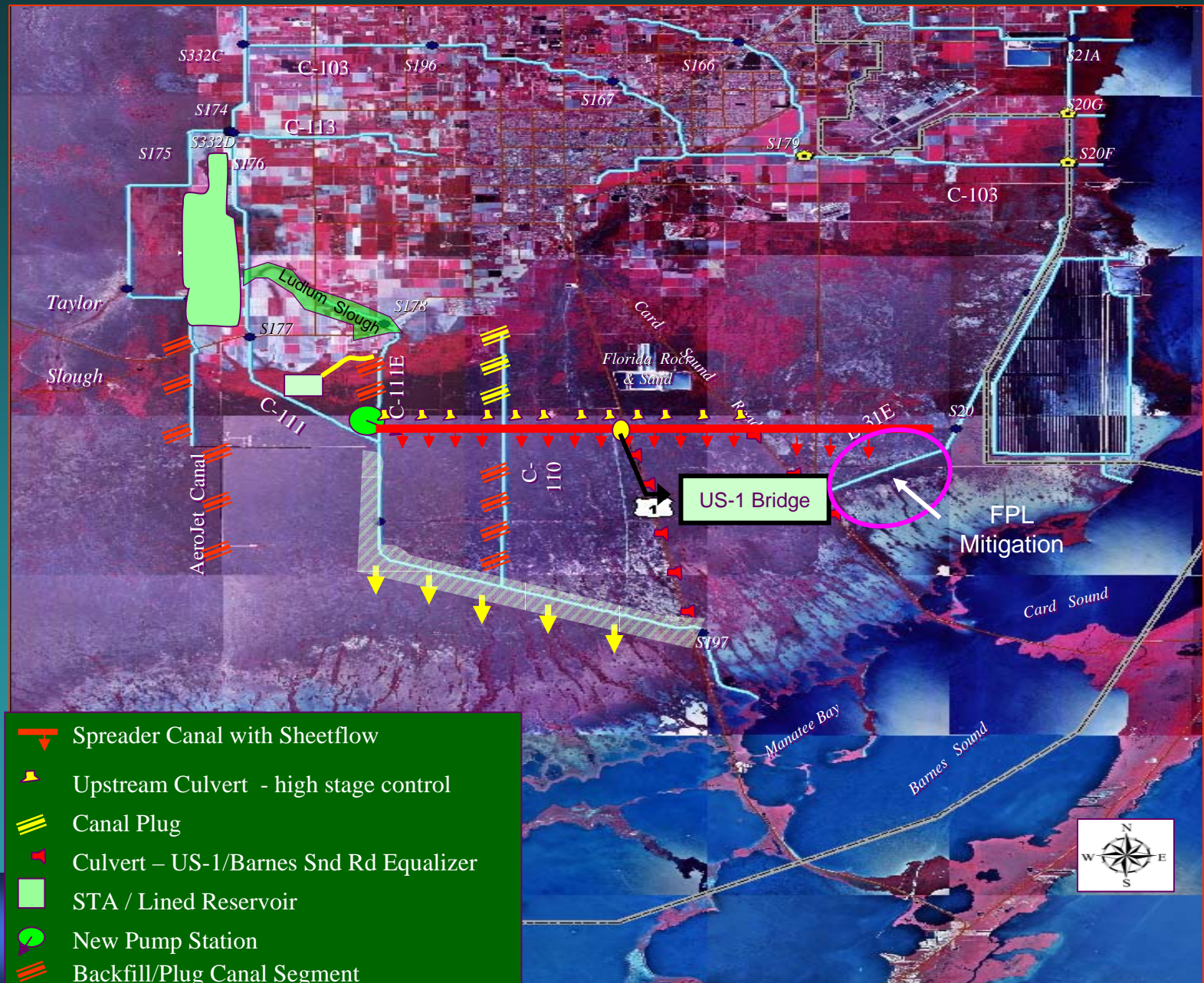




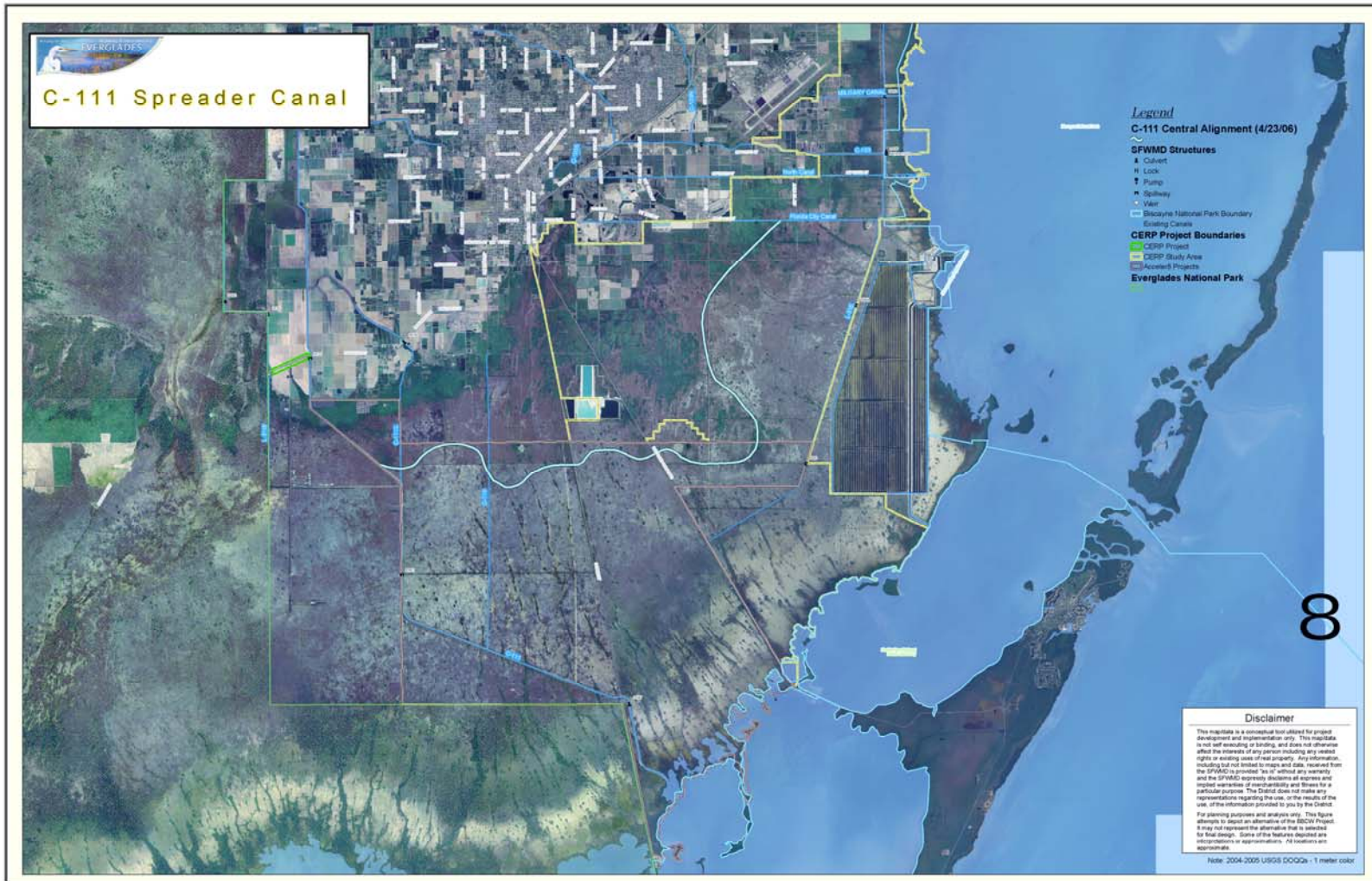
Yellow Book Concept

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PIR Features Under Consideration



Alignment following 2.4 ft Contour?

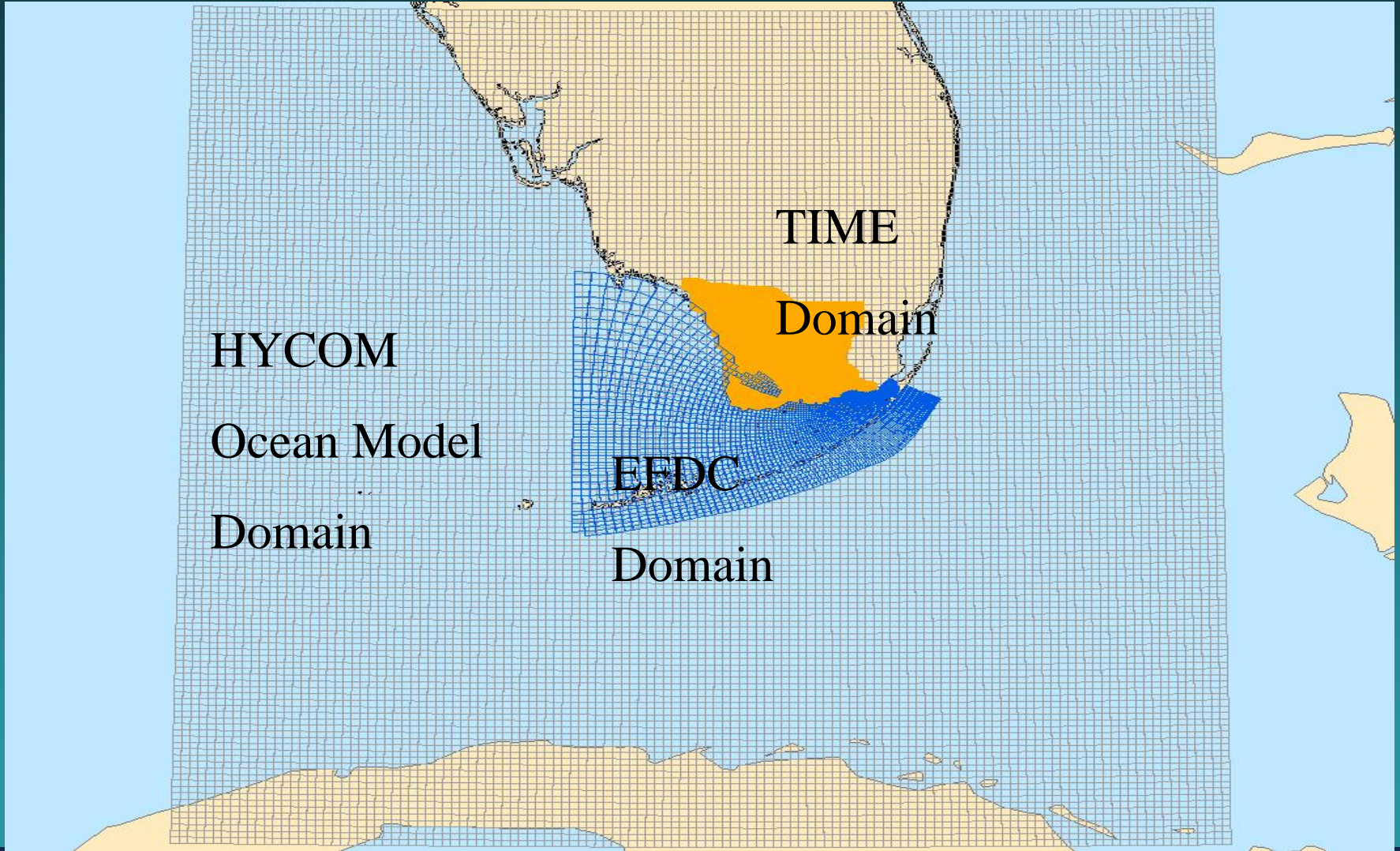


PIR/A8 Coordinated Schedule

- A8 Basis of Design Report review is underway
- PIR team continuing to evaluate total project components; Backfill/Block lower C-111, larger spreader capacity, reservoir peak flow attenuation – TSP by Feb 07
- Draft PIR Document – Nov 07?
- A8 Construction Start - 31Aug 07 (WA date)



Models Are Important Tools to Understand How Sources of Water in Florida Bay Converge and Mix



Status

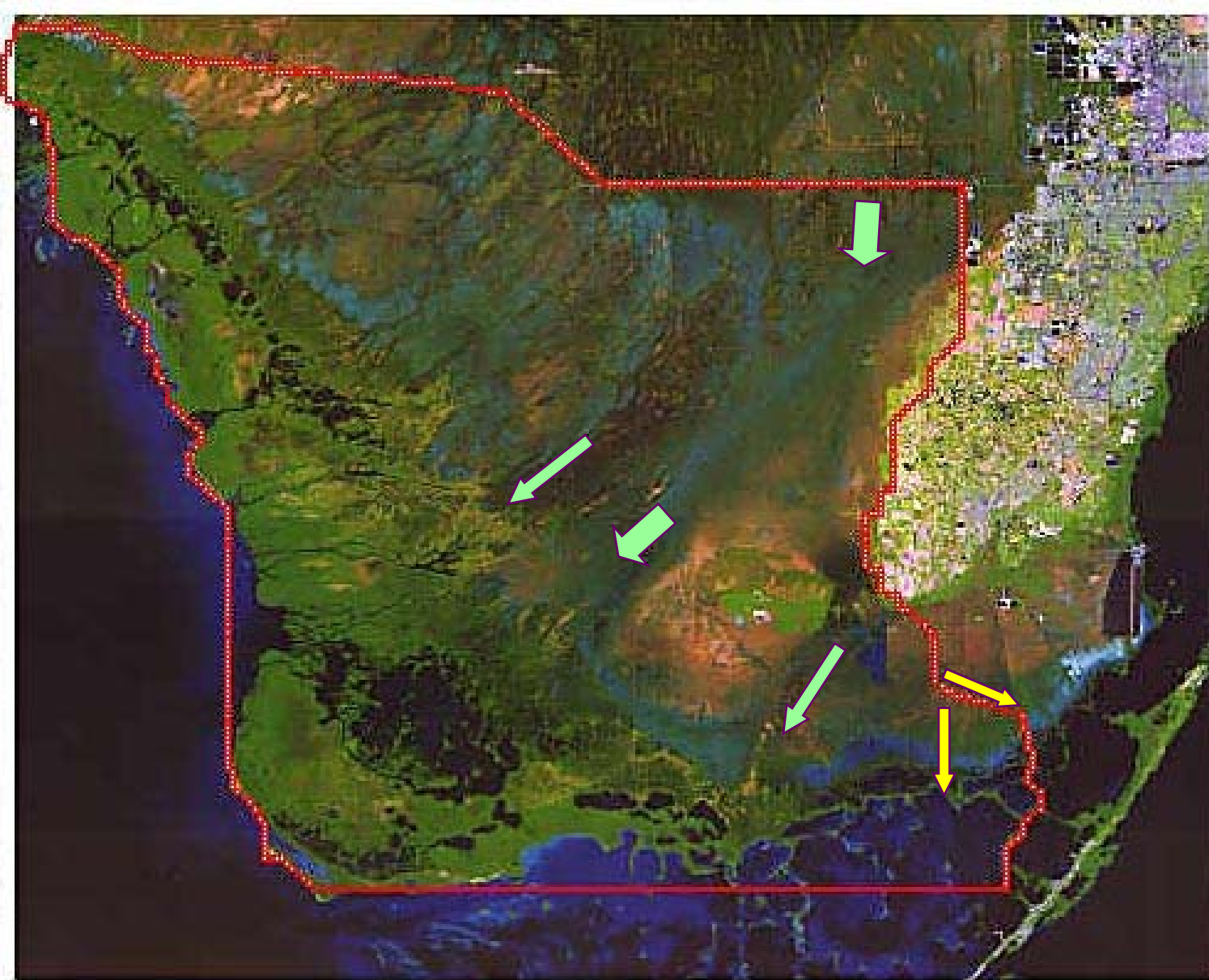
- **Ocean transport model - evaluate Reef Track interactions with Florida Bay and the Gulf Stream.**
- **A comprehensive water quality model - model is assembled and being calibrated – focus on seagrass, algal blooms, water quality interactions**
- **Freshwater Runoff Simulations - Future without CERP for Florida Bay being simulated to evaluate differences in freshwater flow to the bay contrasted with existing conditions – D13R Simulation next**

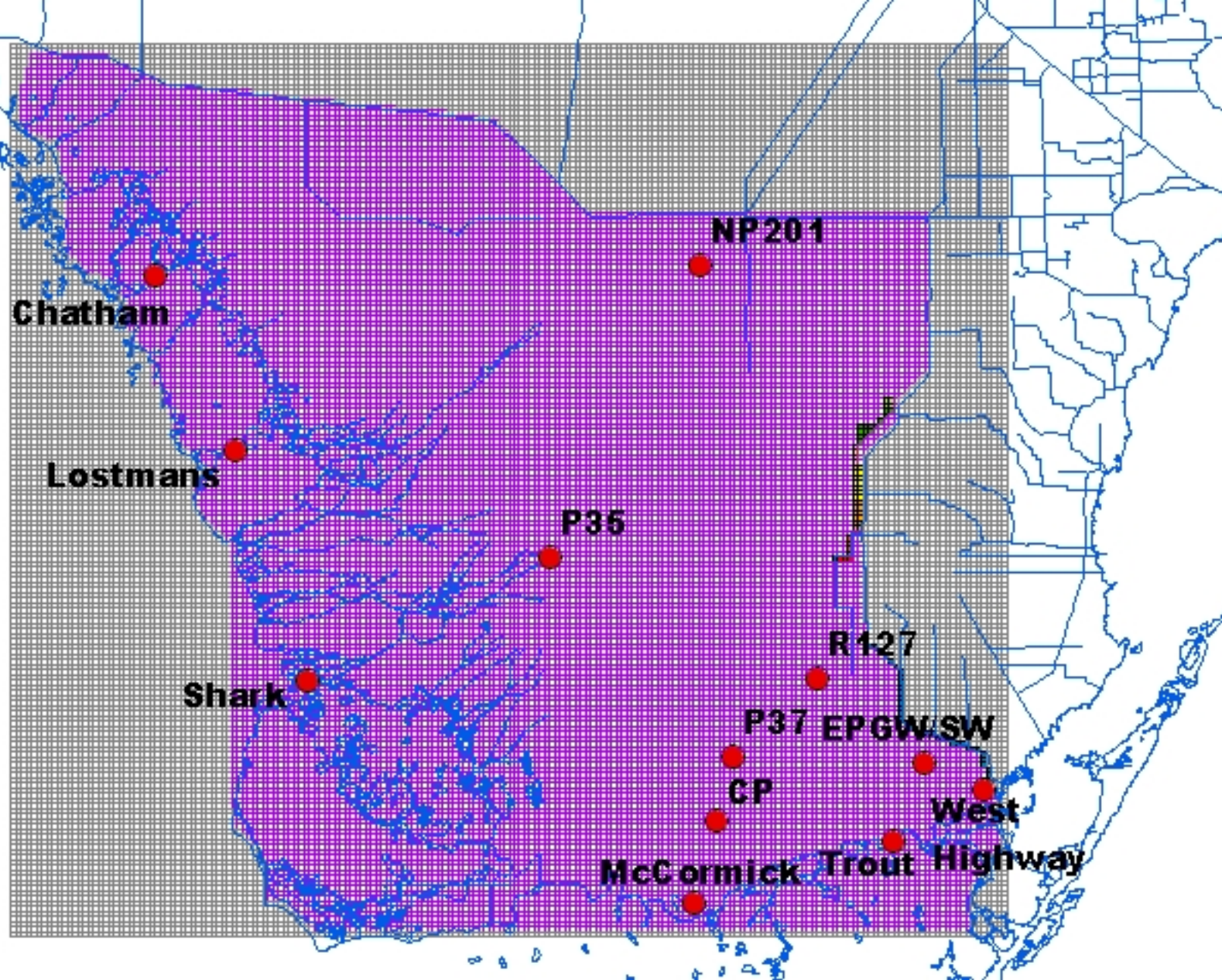
Future Without CERP

Modwaters /C-111 modifications in place

No new sources of Water

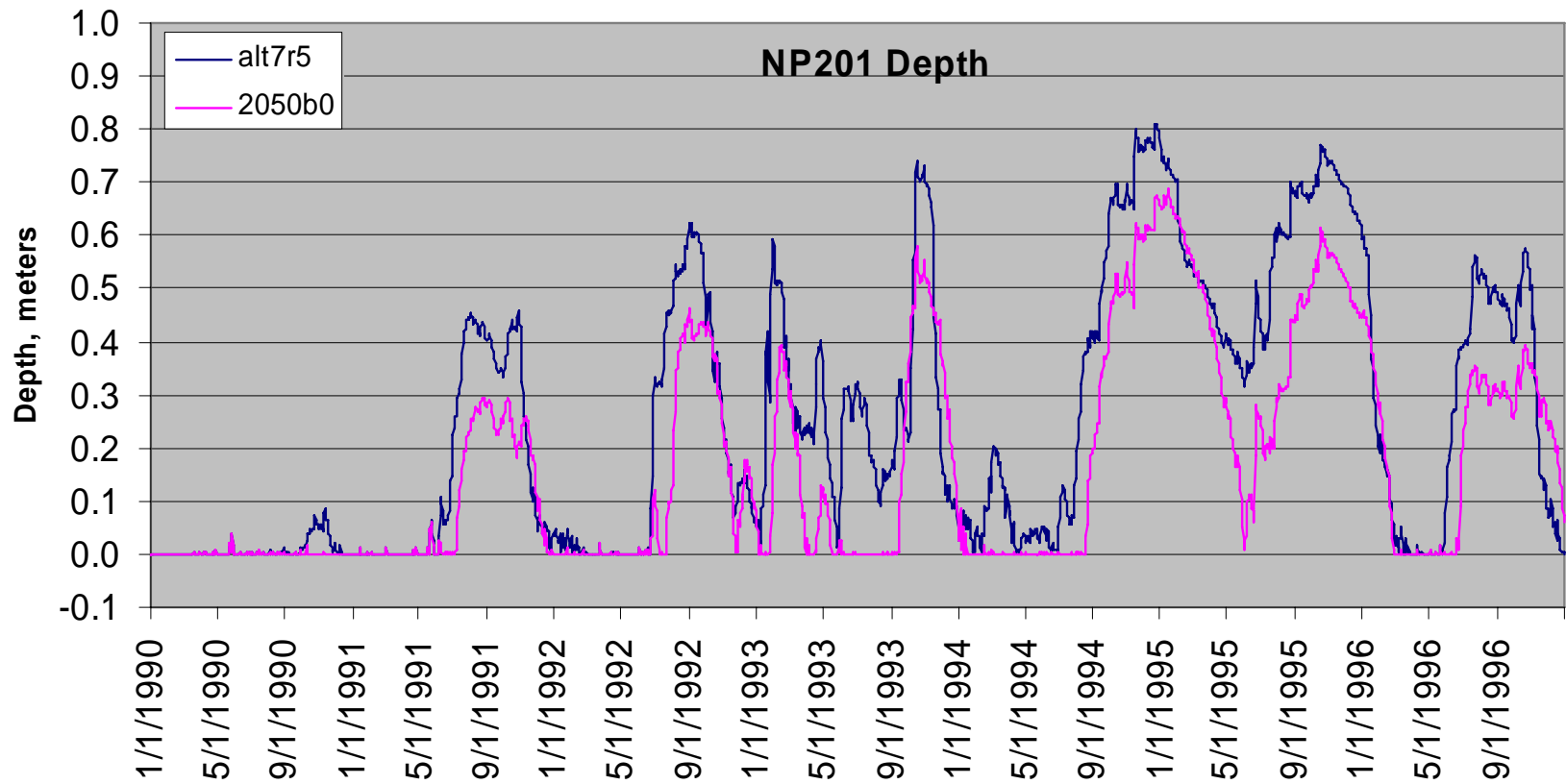
Lower C-111 still creates large pulse flows to Manatee Bay

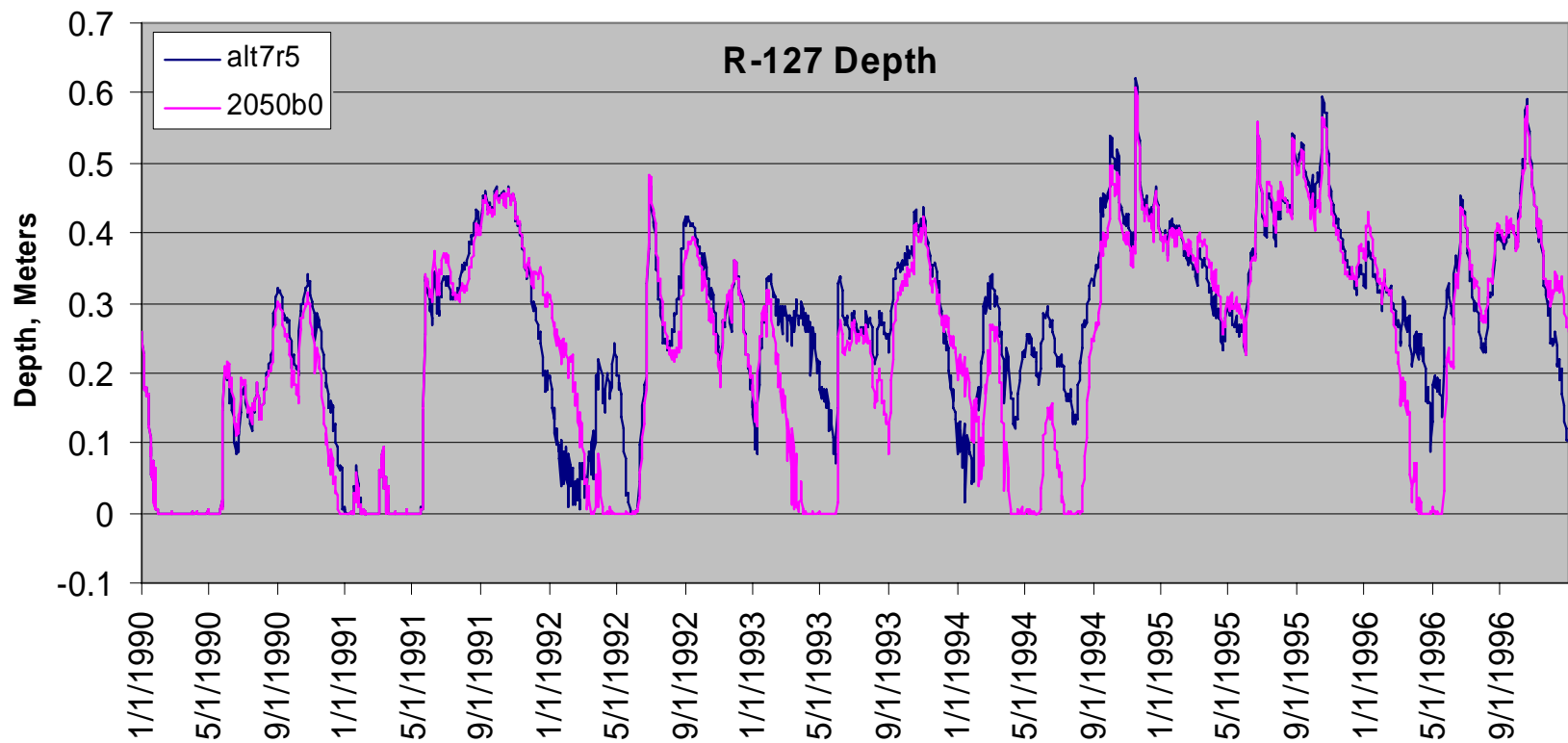


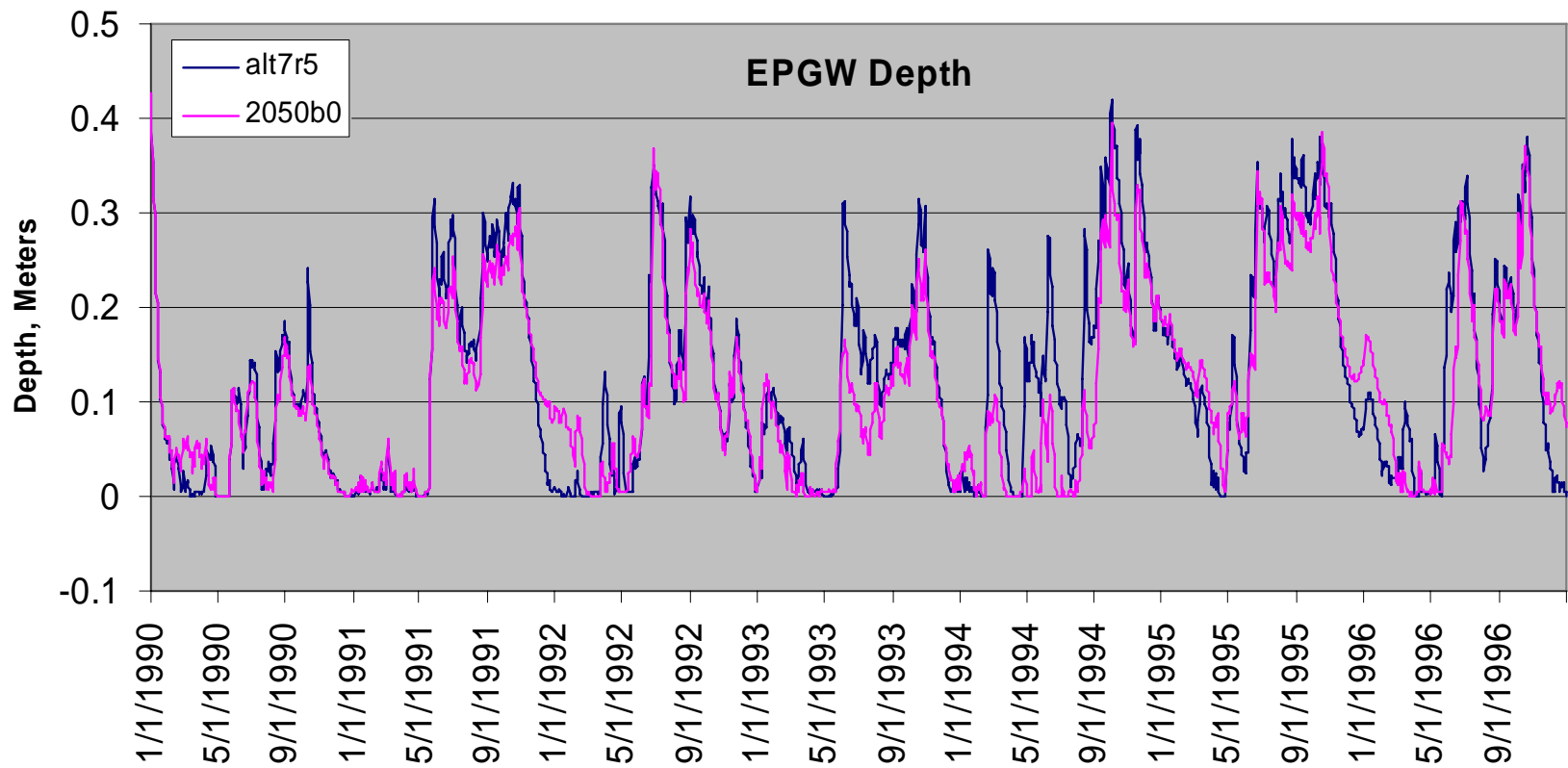


Comparison locations

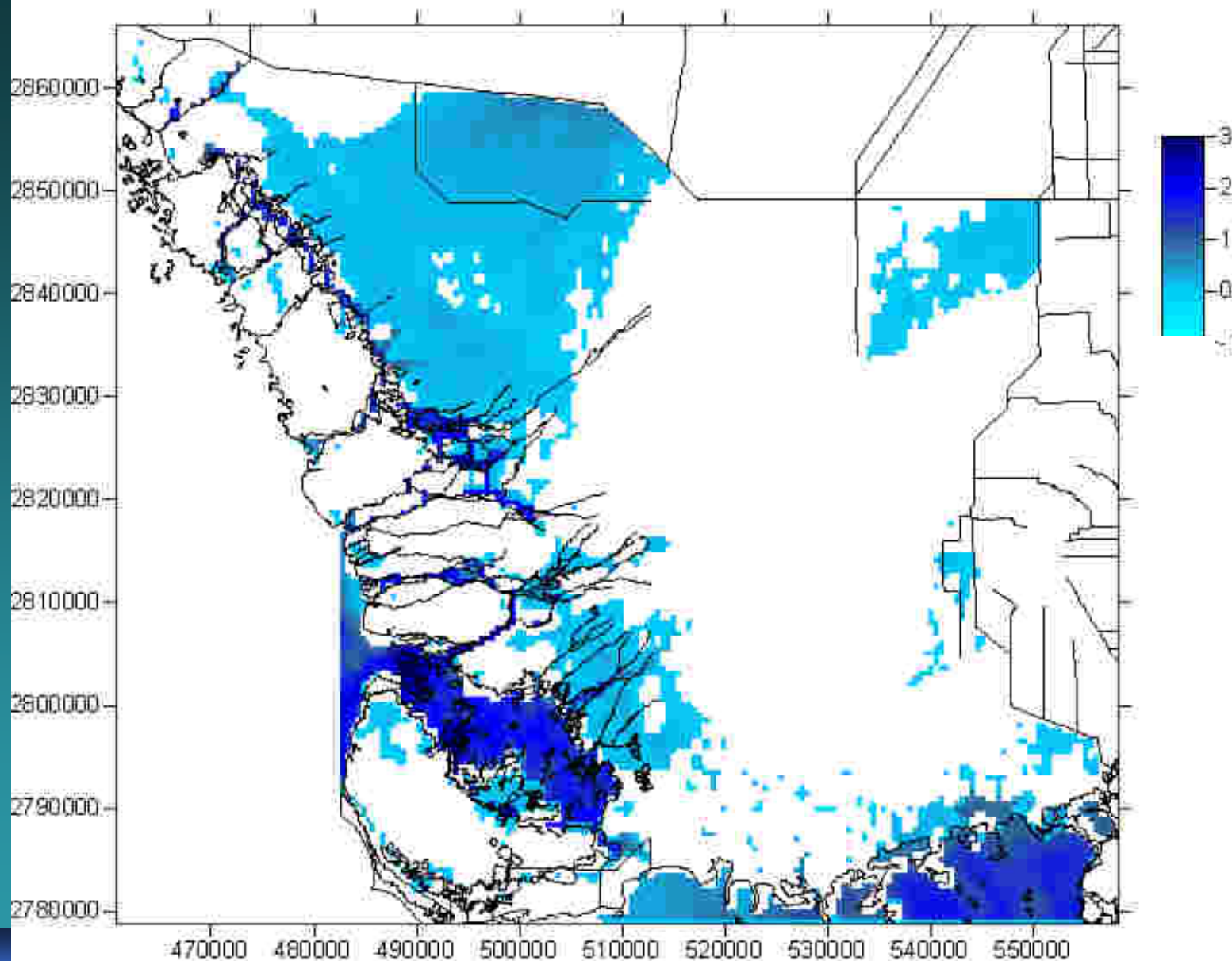
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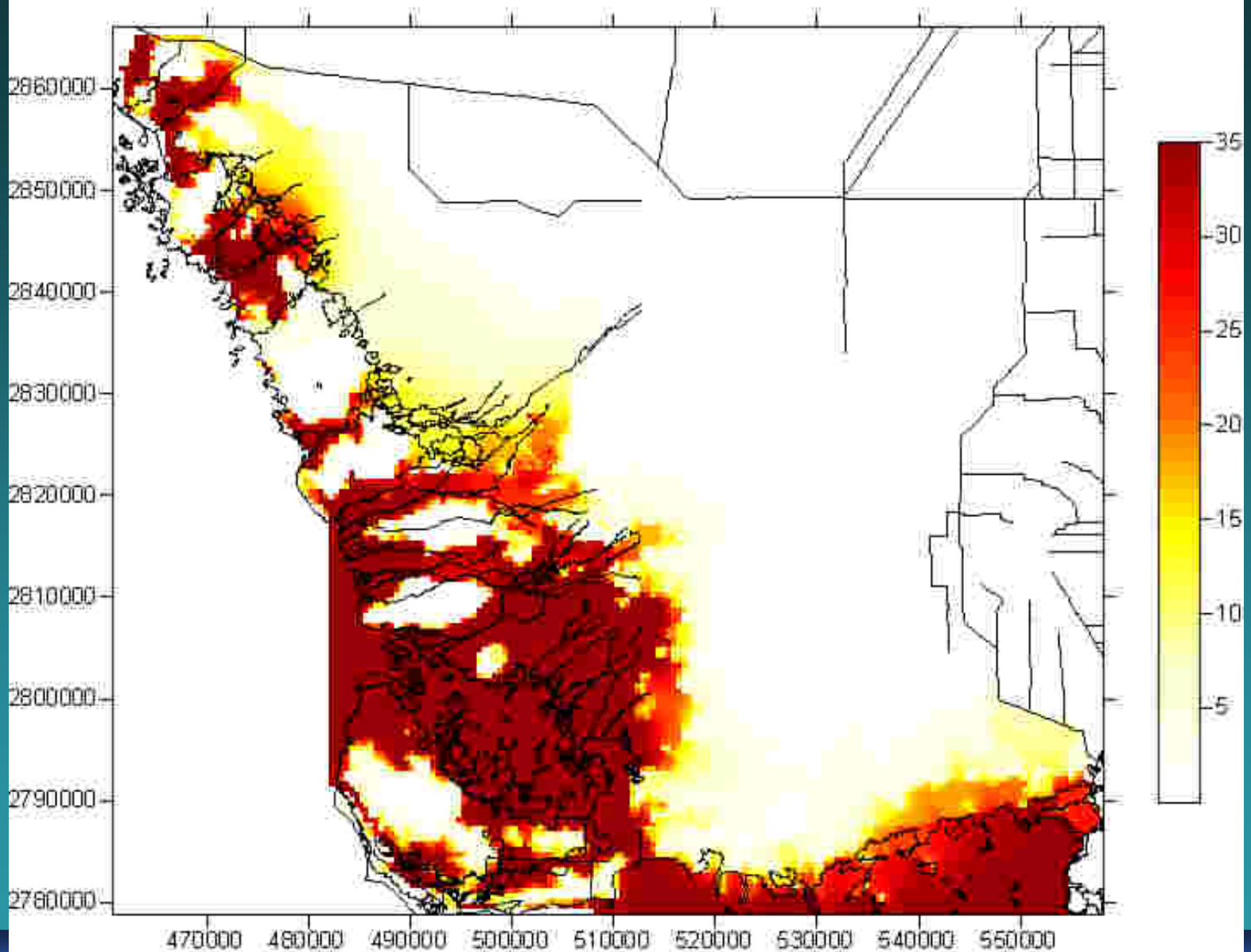


Water Levels 2050B0 MAY 19, 1994



Depth, in meters

2050B0 MAY 19, 1994



Salinity, in psu

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